SCAI Quality Improvement Toolkit

Working on QUALITY, One Cath Lab at a Time

www.SCAI.org/QIT
The SCAI Quality Improvement Toolkit was developed with support from Daiichi Sankyo and Lilly. The Society gratefully acknowledges this support, while taking sole responsibility for all content developed and disseminated through this effort.
Vision

“We have talked for a number of years about the need for interventionalists to “own” the QI process in the cath lab.

SCAI QIT offers a unique opportunity for SCAI members to demonstrate their commitment to improving quality of care and to reassure our patients that their expectations of receiving the highest quality of care in the cath lab are being met.

It’s time for you to get involved. It’s time for you to get to work.”

– Christopher J. White, MD, MSCAI
Defining Quality in the Cath Lab

Operator and Staff Requirements

Procedural Quality

2016 Cath Lab Best Practices

Facility and Environmental Issues

Care Coordination with Referring Physicians
Operator and Staff Requirements
Operator and Staff Requirements

Purpose

- To understand current operator and staff requirements for working in the CCL

Intended Audience

- CCL directors, hospital administrators, interventionalists, nurses, technologists, advanced practice providers, SCAI QIT Champions
Interventional cardiologists should be ACLS certified

AHA ACLS/BCLS Provider Course Completion is valid for 2 years

Up to 12 hours of CME credits

Includes:

- Computer-based lessons
- Completion of practice skills using a mannequin with a certified instructor
ABIM/AOA Certification in Interventional Cardiology is required for operators who completed fellowship training after 1993.

For ongoing re-certification via ABIM, Cardiovascular Diseases certification is recommended but no longer mandatory for Interventional boards.

Evolving certification boards, such as NBPAS, is also available.

Individuals should attain at least 30 hours of CME every 2 years. States or hospitals may have differing requirements.
Maintenance of Proficiency

- **Annual PCI caseload goal:**
  - 50 PCIs is recommended (averaged over two years)*
  - 11 Primary PCIs for STEMI*

- **Institutional Measures of Proficiency**
  - CCL conferences (review complex cases, discuss new techniques or medication, stimulate dialogue and collaboration among peers)
  - Participation in state or national outcomes database

- **Morbidity and Mortality (M&M) conferences**

- **Peer review conferences of random case selection**

*JACC 2013;62(4):357-96
Challenges:

- Lack of expert consensus statements regarding qualifications
- No standardized examination to evaluate proficiency
- Lower volume facilities may face additional challenges with “on the job” training
ACLS certification should be completed yearly.

All staff should have one of the following:
- Nursing RN license
- Radiation Technologist certification
- Cardiovascular technologist professional training certificate
Additional Staff Certification

- Cardiovascular Credentialing International
  - Offers additional certification for CCL staff
  - Similar process to ABIM certification including a standardized exam
  - Cardiovascular invasive specialist, nursing or radiation technologist credentials are a prerequisite
  - Also requires 2 years of CCL experience
  - Recognized by SCAI
Staff Experience

- Nurses should have prior experience in a critical cardiac care unit, surgical unit, intensive care unit or an emergency department.

- For all staff, a sufficient period of mentorship should precede independent work assignments.
In house examination of expected knowledge base recommended for RNs and RTs
A written and skills evaluation are recommended
Prepared materials available
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<th>Can Function Independently</th>
<th>Date</th>
<th>Initials</th>
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<td>• Room start up and rebooting sequence</td>
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<td>• Sterile Tray set up and prep patient</td>
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Catheterization Laboratory RN Critical Knowledge Assessment

1. What is the standard dilution for nitroglycerine?

2. Which of the following drugs do not need to be adjusted for renal dosing?
   a) Bivalirudin
   b) Heparin
   c) Low Molecular Weight Heparin
   d) Tirofiban

3. A patient is overly sedated and by physician assessment needs reversal of versed. What is the preferred agent and what is the initial dose?
Competency for High-Risk Patient Care

- For CCL performing PCI, additional mentorship may be necessary prior to taking call
- Additional training required for specific high-risk clinical situations:
  - Hemodynamic support devices
  - Patients under hypothermia protocols
  - Carotid interventions
  - Percutaneous valves and structural interventions
- CCL Emergency Preparedness Protocols
  - Drills should be performed at routine intervals in the CCL to practice response to these complications
Competency for High-Risk Patient Care

DRILLS

Vascular Complications
Acute Stroke
Emergency Pacing
VF/Cardiac Arrest
Coronary Perforation
Contrast Reaction
Tamponade
Sudden Cardiogenic Shock
Additional References

- ACCF/AHA/SCAI 2013 Update of the Clinical Competence Statement on Coronary Artery Interventional Procedures
  - JACC 2013;62(4):357-96

- SICP Position Papers and Guidelines
  - http://www.sicp.com/content/positionsissues

- Role and Expectations of the Cath Lab Manager
  - http://www.sicp.com/content/role-expectations-cardiac-catheterization-lab-managers

- Scope of practice statement – gives a comprehensive overview of expected skills and responsibilities for CCL staff
Resources & Support

- SCAI QI Committee Assistance: Info@scai.org
- SCAI QIT Updates: http://www.scai.org/QIT/default.aspx
- SCAI QIT Tip of the Month: http://www.scai.org/QITT Tip/default.aspx
Acknowledgments

- SCAI President: James C. Blankenship, MD
- SCAI QI Committee Chair/Vice-Chair: Sunil V. Rao, MD and Kalon K. Ho, MD
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- 2016 QIT Update: Rajesh V. Swaminathan, MD; Jordan G. Safirstein, MD; Henry S. Jennings, MD, Jayant Bagai, MD; Craig J. Beavers, PharmD; Dmitriy N. Feldman, MD; Sunil V. Rao, MD

- 2016 Cath Lab Best Practices Expert Consensus Statement: Srihari S. Naidu, MD; Herbert D. Aronow, MD; Lyndon C. Box, MD; Peter L. Duffy, MD; Daniel M. Kolansky, MD; Joel M. Kupfer, MD; Faisal Latif, MD; Suresh R. Mulukutla, MD; Sunil V. Rao, MD; Rajesh V. Swaminathan, MD; and James C. Blankenship, MD

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